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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,244	01/14/2002	Juho Jumppanen	15208	5900

7590 09/10/2002

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EXAMINER	
MENON, KRISHNAN S	

ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 09/10/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-7

Office Action Summary	Application No.	Applicant(s)	
	10/047,244	JUMPPANEN ET AL.	
	Examiner	Art Unit	
	Krishnan S Menon	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

This is a corrected office action, which supercedes the first action (paper #5 dated 7/3/02). The applicant was not given the benefit of an earlier priority date (July 13, 1999) in the first action due to an error by the office in not noticing the priority date claim for the Great Britain application in the Declaration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP(H6-227994 in view of Chromecek (US 4,962,133)

JP(994) discloses a process for separating essential oils comprising steam distillation (page 3, Para 0001) to a mixture containing essential oils and water, contacting with divinyl benzene polystyrene adsorbent or activated carbon, and then desorbing the essential oils (page 3, para 0001). The water (hydrophilic phase) temperature is at 60° C (page 8, para 0020); the hydrophobic

absorbent is synthetic polymer – divinyl benzene cross-linked-polystyrene, activated carbon, etc. (page 8: 0016,0017); material is Cyprus (page 3: claim 2); Cyprus or yellow oils (page 11: 0030); and the process is continuous (page 11: 0029).

JP (994) is silent on recycling the hydrophilic solvent, water as in claim 1 of the instant application. However, JP (994) states conserving water (solvent) as one of the advantages of the process. It would be obvious to one of ordinary skill in the art at the time of invention to recycle the water used in the process. One of ordinary skill in the art at the time of invention could chose to recycle water in the process which is a standard practice in the industry to recycle solvents in extraction/distillation processes.

JP(994) also is silent on the word 'chromatography' as the process even if JP(994) describes adsorption and then eluting/desorbing with another solvent as in chromatography, as in claim 8 of the instant application; and does not teach separating Orris oil to myristic acid and irone, as in claim 9 of the instant application. Chromecek (133) teaches use of styrene-divinyl benzene type carrier/adsorbent media for essential oils including orris and rosemary oils (col 4: lines 6-19; col 15 line 26 – col 16 line 16). It would be obvious to one of ordinary skill in the art at the time of invention to chose the teachings of Chromecek (133) and make a chromatographic column to separate the essential oils and further fractionate the essential oils from Orris to its components, using the process of JP(994) teachings. One of ordinary skill in the art at the time of invention could chose the Chromecek's (133) teaching with the JP(994) processing for chromatographic separation of Orris oil as equivalent process affording equivalent results.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Mastelic; Kem Ind, 30 (5) 249-252 (1981): Steam distillation and activated carbon adsorption for essential oil process; including recycle of process water.

2. JP (Kokai-60-115699): hop essential oil recovery by steam distillation followed by adsorption and desorption.

3. Jain (US 5,955,084): chromatographic separation of components of essential oils;

4. Machale (J. Chem. Tech. Biotechnol., 1997, 69, 362-366): chromatographic separation of essential oil components

5. Reznik (US 6,383,543) Chromatographic separation of essential oils like rosemary.

6. Todd (US 4,877,635) Extraction of essential oils

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan S. Menon
Patent Examiner
August 28, 2002

JOHN KIM
PRIMARY EXAMINER
GROUP 1700

Inventor: **Jumppanen** Application Number: **10/047,244** Date: **1/14/02; 7/12/00**

Cl. #	Dep. on	Limitation	Chromecek 10/90 US 4,962,133	Azuma JP(H6-227994) 8/94	Reznik 5/02 US 6,383,543 B1	Ma Ch Bio 69/
1	--	Process of separating essential oils … comprising ..	--	3[0001]		
		Steam distillation or extraction to	--	Do		
		Mixt. Containing ess. Oil and hydrophil	--	Do		
		Mix -> hydrophobe adsorbent in vessel		Do		
		Recycle hydrophyl		5[0009]		
		Desorb oils		11(para 1)		
2	1	Mixt from steam distillation of matl with ess oils		3[0001]		
3	2	Hydrophyl has temp 55-70C		8[0020]		
4	1	Hydrophobe synthetic polymers, mod silica, act. Carbon	2(25-30); 4(6-15)	8[0016,0017]		
5	4	Adsorbent {polystyrene, divinyl benzene crosslinked polystyrene, c4-, c8- and c18-coated silica}	2(25-30)	Do		
6	1	Materials {amber seed….}		3[claim 2]	5(38,39)	
7	1	Oils {…}		11[0030]	6(23-26)	
8	1	Process; chromatography		--obvious	5(18-26)	P 3
9	8	Process: essential oil is Orris oil and is separated by col to myristic acid and irone		--	--6(60-64) obvious	p-3
10	1	Process carried out continuously		11[0029]		